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## COVER ARTICLE

# BOTANICAL DETERMINATION OF THE MIDDLE EASTERN TREE OF LIFE

J. ANDREW McDONALD

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*Now that man has become like one of us in knowing good from evil, he must not be allowed to reach out his hand and pick from the tree of life too, and eat and live forever! . . . (so god) banished the man, and in front of the garden of Eden he posted the great winged creatures and the fiery flashing sword, to guard the way to the tree of life.*

(Genesis 2:21–24)

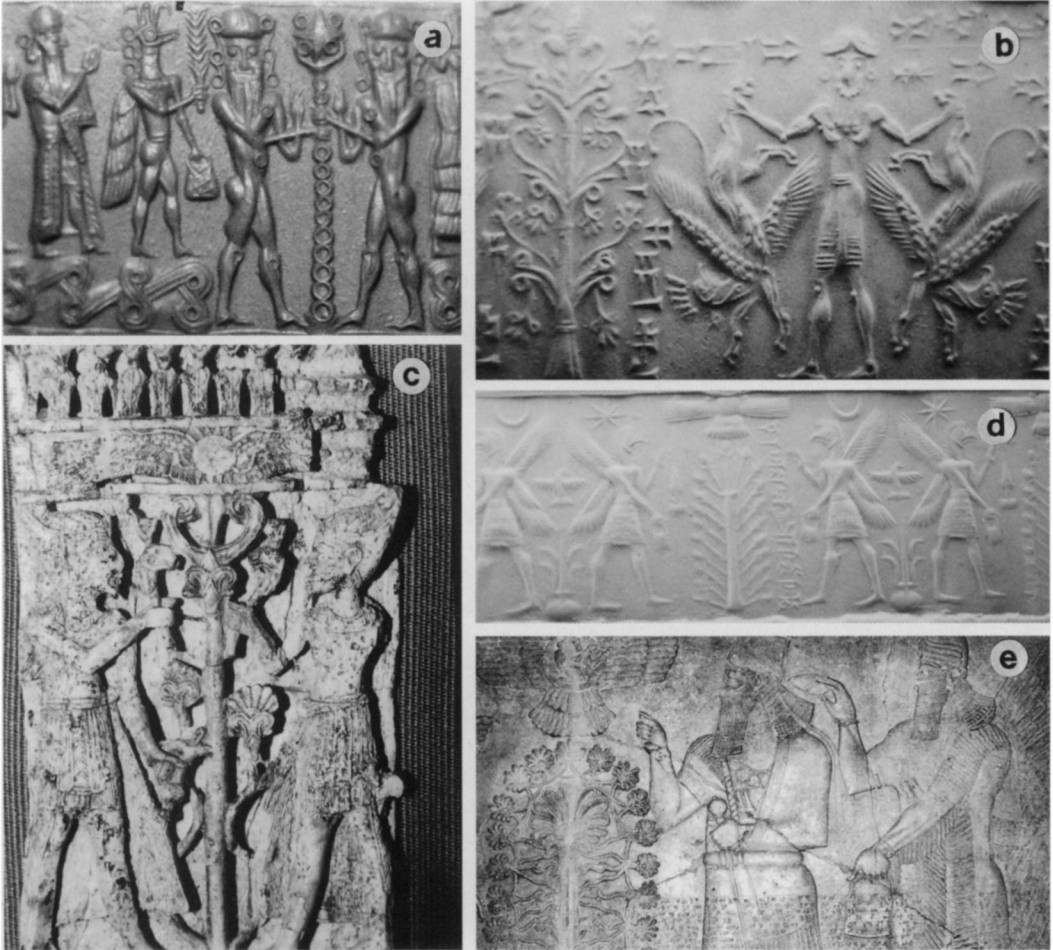
Early myths and religious beliefs that account for the origin of life and human aspirations to attain immortality are often ignored or scorned by natural historians, as they tend to contradict modern Darwinian views of natural creation and current biological understandings of the aging process. Allusions to an immortalizing ‘tree of life’ in the mythic traditions of Mesopotamia, the Levant, and India are therefore thought to arise from the hopeful and imaginative yearnings of superstitious peoples rather than historical realities. Linguists and comparative mythologists have long recognized, nevertheless, that references to such a plant appear recurrently in mythic, artistic, and historical records of Indo-European, Semitic and Hamitic peoples (Cambell 1991:9–17; Cook 1974; James 1966:129–162; Parpola 1993). This observation convinces some commentators that ancient beliefs in an immortalizing ‘plant of the gods’ may have a material or logical basis in human history. Some historians have hypothesized that the concept of a tree of immortal life derives from the widespread practice of ingesting psychotropic plants to heighten or distort human perceptions of reality (Ruck 1986; Ruck, Staples, and Heinrick 2001; Schultes 1992; Smith 2000; Wasson 1986). Whether this is the case or not, no single plant has ever been identified that could have served the same purpose for so many different peoples throughout Europe and Asia.

### SACRED TREES IN THE VISUAL ARTS

Visual renderings of a symbolic ‘tree of life’ in the arts of the Near and Middle East from the 3<sup>rd</sup>–1<sup>st</sup> millenium BCE portray a plant whose physical attributes are generally consistent with

mythical traditions of the region. They depict a pillared plant that grows from an aquatic medium or world-mountain toward the image of a sun (Fig. 1a, c–e; Danthine 1937, Fig. 139, 176, 254, 691–696). This plant is often illustrated in a narrative context, usually in association with a host of divine human figures, snakes, eagles, lions, bulls, or leogryphs. Early depictions of the motif on cylinder seals from the 3<sup>rd</sup> millenium BCE are usually too poorly preserved or stylized in their execution to allow for a botanical interpretation (Frankfort 1939, Pls. 4j, 13e, h; Parpola 1993), but later interpretations of the plant during the late 2<sup>nd</sup> millenium BCE are increasingly amenable to botanical scrutiny. Renderings that date from the 1<sup>st</sup> millenium BCE allow, in fact, for a species determination. Since late portrayals of the plant are normally regarded as refinements on earlier interpretations (James 1966; Parpola 1993), it is reasonable to assume that a botanical assessment of later materials is relevant to those of older origin.

Two distinctive forms of this mystical ‘world-tree’ are preserved on cylinder seals from the 2<sup>nd</sup> millenium BCE. One basic tree type is portrayed as a columnar plant that supports a luminescent object (Fig. 1a); another is depicted as a ramified, monopodial treelet (Fig. 1b, d). The former type presents a naked trunk that is generally lacking of lateral branches, save for a pair of opposing horn-like offshoots at the apex of the plant which most art historians are inclined to interpret as a crescent moon. In like manner, a radiate structure that is cradled by the plant’s horizontal crescent is normally interpreted as a solar, lunar or astral motif (Fig. 1a; Danthine 1937, Fig. 188, 189, 438, 497, 498, 502–504).



**Fig. 1. a–e.** Historical depictions of the Mesopotamian and Levantine sacral tree. **a.** Two heroic figures uphold a sacral tree while a quasi-personified griffin emerges from a watery substrate to sanctify the plant with a bucket and branch. An ascending pair of serpentine stems supports a crescent moon (horns or branches?) and tetramerous sun (or flower?). Mitannia. 1350–1250 BCE (Louvre Museum). **b.** A divine man subdues two griffins that once roosted in the tree of life. The monopodial tree produces a series of opposite branches that terminate in volutes. Floral shoots depicted as stylized ‘palmettes’ grow from the axils of lateral branches and a strobilus is held erect at the apex. Mitannia. 1350–1150 BCE (Boston Museum of Fine Arts). **c.** Two divinities (or priests?) stand before a pillared, blue-pigmented tree of life. Lateral branches produce lotus blossoms in the form of stylized palmettes. Note that the central axis supports a horned structure and a winged disk. Two volutes and a deltoid appendage subtend the tree’s apex and each palmette, these features suggesting the profile of a tetramerous flower. A series of cobras stand guard over the tree, each supporting a moon and solar disk upon their head. Note that the diadem of the serpents mirror the image of the sacral tree’s crown. Phoenician craftsmanship at Nimrud (Kalakh), Iraq. 9–8th BCE (British Museum). **d.** Personified griffins stand before a budding or fruiting sacral tree with buckets in hand. The symbol of the sun or a sun-god, the winged disk, illuminates the plant. Mesopotamia. 883–614 BCE (Boston Museum of Fine Arts). **e.** King Assurnasirpal stands before a sacral tree while a winged genius anoints him with a bucket and cone. A sun-god known as Shamash or Assur is observed emerging from his solar disk to witness the sanctification of the sovereign. Palace of Assurnasirpal II, Nimrud, Iraq. 883–859 BCE (British Museum).

As a whole, this highly stylized motif is thought to symbolize a vegetative entity that governs solar and lunar cycles, the changing of seasons, and annual cycles of plant growth.

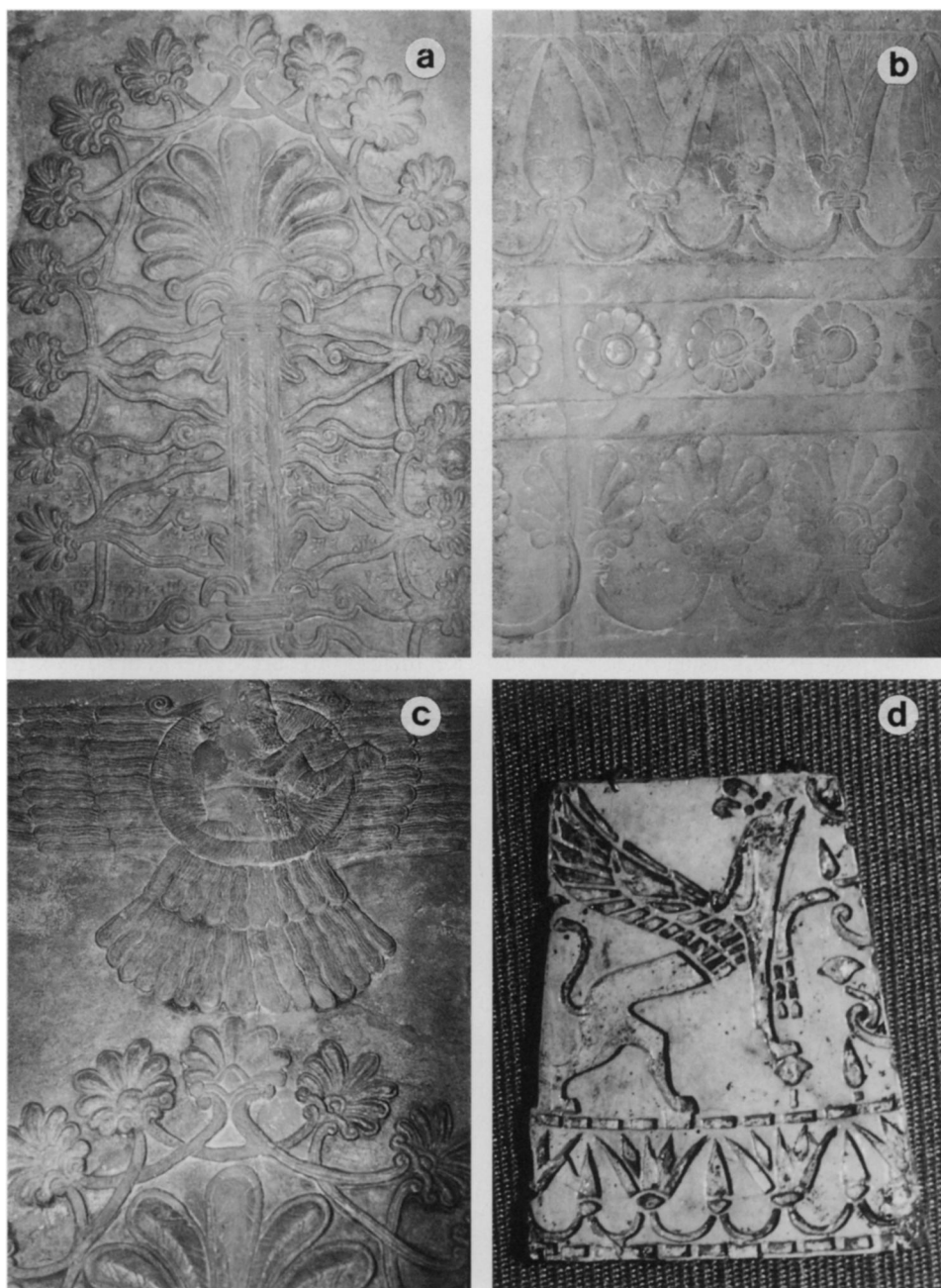
This image is often associated with a host of divine human figures, one prevailing form of which is rendered with a naked body, elongated face, broad nose, curly tresses, a beard, and rounded crown (Fig. 1a, b). This man is often accompanied by a variety of animalian spirits and fully robed anthropomorphic gods and goddesses, the latter of whom tend to congregate about the sacred plant to pay homage, often in association with aquatic environments (Fig. 1a; Danthine 1937, Fig. 139, 176, 254) or upon the tree's cosmic mountain (Danthine 1937, Fig. 502, 624, 625, 683, 691–695). The predominant naked figure often subjugates lions, bulls and leogryphs by hoisting the mythical creatures into the air by their hind legs or tails (Fig. 1b, 5c). While the underlying meaning of this bold posture is still not fully understood, it seems to relate in some way to the gaining of access to the sacred tree (Fig. 1a, b, d, e, 2d, 5a, b). In like manner, the subordinate animals appear to play a dualistic role in Middle Eastern iconography, as either protectors or devotees of the divine plant. In the latter capacity they conventionally carry a short-handled pail (or purse?) in one hand and a vegetative motif in the other (Fig. 1a, d, e). They perform an act of consecration that historians are given to interpret as an 'anointing,' 'smearing' or 'watering' of the sacral tree (Black and Green 1992:16, 170; Frankfort 1939:204, 1989:160–162; Goldsmith 1928:101).

These same mythical figures congregate around a cosmic tree that produces opposite, tiered offshoots (Fig. 1b–e, 2a). Lateral branches of this sacred tree often bear stalked palmettes in their axils (Fig. 1b, c, e, 2d, 5a, b) and stylized hooks, volutes, fruits or cone-like structures at their tips (Fig. 1b, c, d, 2d, 4a, b; see also Black and Green 1992:80; Danthine 1937, Fig. 380, 407, 409–412, 580). This particular tree is clearly distinguished on a morphological basis from its pillared and branchless counterpart, yet historians are inclined to recognize it as a variant rendering of the branchless tree (Fig. 1a), as we occasionally encounter hybrid motifs that exhibit vegetative nuances of both tree types (Parpola 1993, appendix A, pp. 200–201). Moreover, we observe the same bizarre sphinxes and personi-

fied griffins performing the same unusual rites on both motifs (Fig. 1a, d, 2d, 5b).

By the middle of the 1<sup>st</sup> millennium BCE we note that the sacral tree has undergone few changes, as the plant still exhibits a naked, columnar trunk, a palmate canopy, and close contacts with the sun, winged humans, or various animalian spirits (Fig. 1e, 2a, c, 5b). Though still stylized at this late date, some of the plant's vegetative features are now executed with increasing realism, as exemplified by the sacral trees of Assurnasirpal II at Nimrud and Nineveh during the 9<sup>th</sup> c. BCE (Fig. 1e, 2a). These large (1–2 m tall) and detailed interpretations of the archaic tree can be traced from wall paintings of the same motif at Kar Tukulti-Ninurti during the 12<sup>th</sup> century BCE (Frankfort 1989; Fig. 152, 153), and match closely to renderings of the tree on ivory fragments of contemporaneous age (Fig. 1c, 2d, 5b). A general consensus has been reached that all of these vegetative motifs are symbolic of power, fertility and everlasting life, yet there is little agreement as to how the images relate specifically to religious beliefs and myths of Mesopotamia and the Near East (Parpola 1993).

Archeologists and art historians often identify these motifs as stylized date palms (Fig. 2a), owing primarily to the plant's palm-like aspect and to the importance of dates in the diets and local economies of Middle Eastern cultures (Danthine 1937; James 1966:98; Mazar 1961, 4:71; Parpola 1993; Porter 1993; Tylor 1890). Other commentators prefer, however, to refer to these symbolic images as 'pillars of heaven' (Frankfort 1939:276; 1989:248, 296), 'palmetto trees' (Keel and Uehlinger 1998:199, 234), or 'Cypriote palmettes' (Frankfort 1989:323), so as to emphasize their magical significance. Labels of the latter type are often used, for example, in reference to sacral trees that are encountered on reliefs inside Assurnasirpal's temples during the 9<sup>th</sup> century BCE (Fig. 1e, 2a), since the general appearance of these executions do not suggest the image of a date palm per se. While Assurnasirpal's trees do possess a pillared trunk and palmate canopy, we note that a series of small palmettes surround the tree in an array that is inconsistent with palm morphology. The small palmettes are linked by smooth and pliable stems that tie off directly to the plant's pillared axis, ostensibly to establish a visual relationship between the repeating palmettes and the sacral



**Fig. 2. a-d.** The Lotus as a 'Pillared Palmette.' **a.** Assurnasirpal's sacral tree normally exhibits a columnar trunk and the profile of an apical rosette (i.e., the classical 'palmette'). The surrounding palmettes match closely with the tree's crown and are linked by a pair of serpentine stems. Extensions of the stems tie off to the plant's central axis. Nimrud, Iraq. 883–859 BCE (British Museum). **b.** A door panel of Assurnasirpal's palace equates a series of palmettes with a running link of lotus blossoms. Radial views of the solar flowers are portrayed as rosettes. Alternating bud-and-blossom motifs symbolize the natural process of rebirth and the metaphysical concept of immortal life. Nineveh, Iraq. 704–681 BCE (British Museum). **c.** A solar god emerges from the symbol of the sun—a winged orb—to give life to the sacral tree. Nimrud, Iraq. 883–859 BCE (British Museum). **d.** A crested griffin stands upon a lotus flower and reaches toward the tree of life. Branches of the immortalizing plant support alternating lotus buds and blossoms (a symbol of eternal recurrence) and reflect the image of a running bud-and-blossom motif at the base of the tree. Residues of blue pigments remain on the flower's petals and the griffin's wings. Nimrud, Iraq (of Phoenician origin). 9–8<sup>th</sup> c. BCE (British Museum).

tree's canopy (Fig. 2a, c). We also note that the cluster of appendages that comprise each palmette do not suggest the morphology of a date palm's pinnate blades (Fig. 3a), but rather a simple, narrowly elliptical, foliaceous structure (Fig. 1c, e, 2a, b, 4d, f, 5b, 6a). Hence one is hesitant to identify the plant's palmate spray of 'leaves' as a palm canopy. To further question this association, we note that the rosy stems of the plant occasionally give rise to a peculiar fruit that bears no resemblance to a date (Fig. 4b, d, f; Danthine 1937: Fig. 426, 428, 431, 440, 448). On other occasions the stylized bower produces a series of stylized strobiloid structures (Fig. 1b, 6a–c; Danthine 1937, Fig. 380, 407, 409–412, 482, 490, 580, 821; Loud 1939, Pls. 20, 21), which art historians are apt to identify as 'cones', 'pine-cones', or 'pineapples' (Black and Green 1992:46; Menant 1888:64, Pl. VIII,X; Parpola 1993:183). These recurrent features are also discordant with physical attributes of a date-palm.

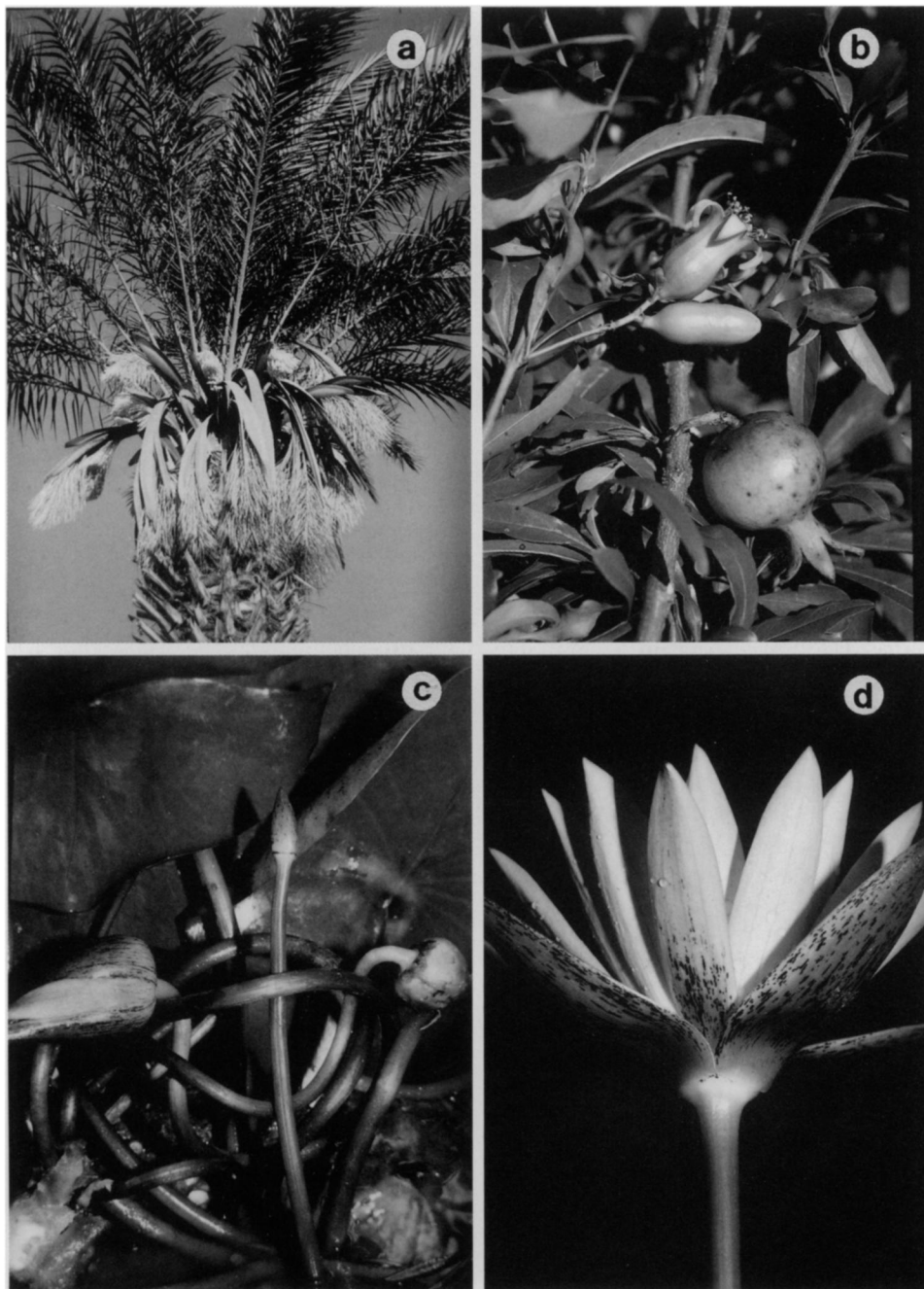
Assurnasirpal's trees maintain a close symbolic association with the sun, but at this point in time the solar orb is removed from the boughs of the plant and placed above the motif in the form of a winged disk (Fig. 1e, 2c). A divinity that emerges from the center of the winged orb is normally interpreted as one of various sun-gods that were worshipped by the Sumerians, Akkadians, Assyrians, Babylonians and Perso-Aryans, known variously as Utu, Shamash, As-sur, Marduk or Ahura Mazda (Black and Green 1992:129, 182–184, 186). It has proven difficult, however, to identify which of these gods is depicted specifically in Assurnasirpal's palaces at Nimrud and Nineveh, since the same winged-sun motif has been employed by many and various cultures throughout the fertile crescent from the 3<sup>rd</sup>–1<sup>st</sup> millennia BCE. Furthermore, all of the aforementioned divinities share close mythic and iconographic affinities with an immortalizing tree of life (see below).

Although we occasionally encounter the unmistakable image of a date palm on temple reliefs and cylinder seals that commemorate historical scenes [i.e., as deduced by their columnar trunks, persistent leaf bases, pinnate leaves, and spathate inflorescences (Fig. 3a; see also Danthine 1937, Fig. 13, 14, 18, 19, 25–27; Roaf 1998:189, 190)], images of date palms are only rarely associated with mythical scenes (Danthine 1937, Fig. 15, 16, 20, 24, 31, 34). Religious and

fantastical scenes usually employ a highly stylized interpretation of the world-tree, which, as earlier noted, is often surrounded by an arching network of supple, succulent stolons (Fig. 1b, e, 2a, c, d, 4d, f, 5b, 6c). Or more importantly, we notice that the sacral tree's palmettes are frequently drawn across a horizontal plane (Fig. 2b, d, 4d, f, 6c), in which arrangement they seem to suggest a floral motif rather than a branching canopy. This specific association is clearly implied on a stone panel that once decorated a doorway of Assurnasirpal's chambers (Fig. 2b), where horizontal alignments of repeating palmettes are unequivocally equated with a lotus bud-and-blossom motif.

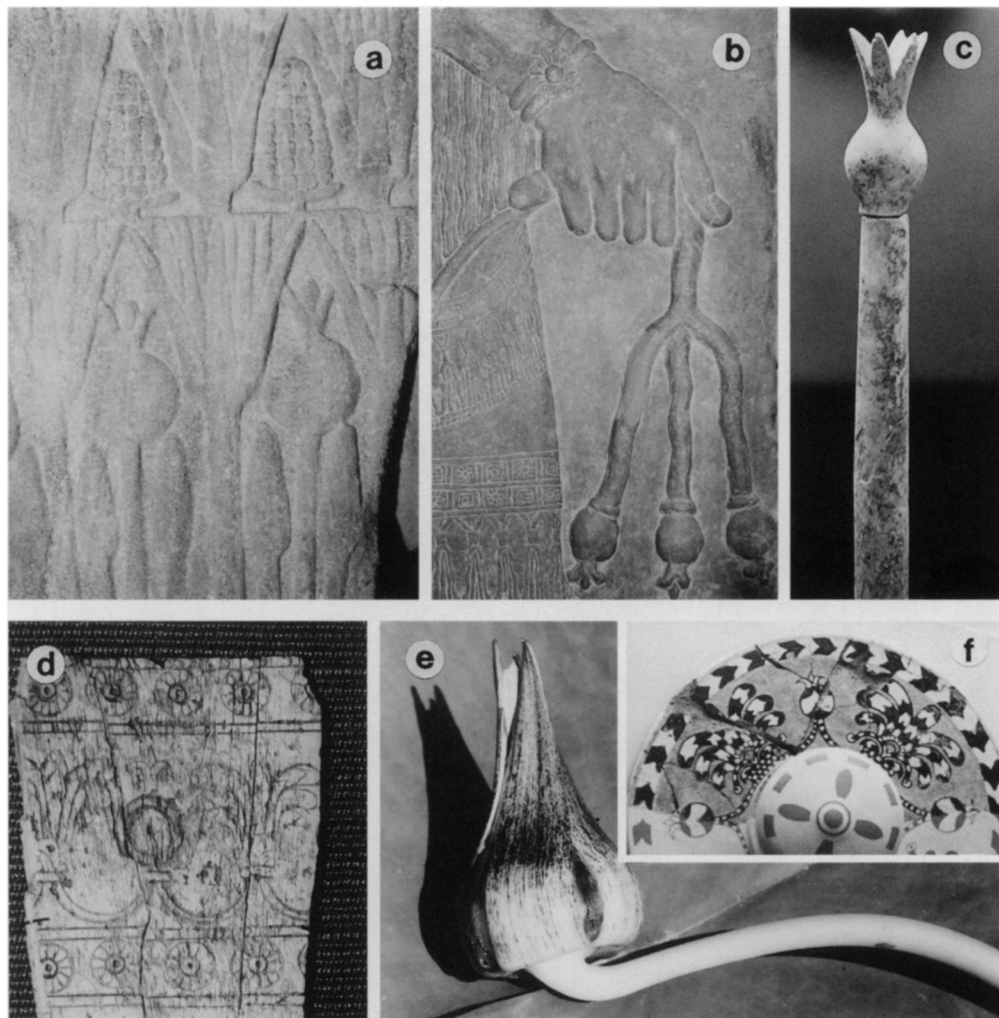
The frequent association of lotus blossoms and palmettes in the visual arts of the Middle East is of critical importance for several reasons. First, the classical lotus bud-and-blossom motif that we encounter in Egypt as early as 3000 BCE and in Mesopotamia by the second millennium BCE is widely recognized as a symbol of rebirth and immortal life. Hence the symbolic inference of a sequential bud-and-blossom motif agrees conceptually with the metaphorical concept of an immortal 'tree of life'. Secondly, we note that Mesopotamian palmettes are usually subtended by a pair of lateral volutes with a deltoid or rounded appendage fixed between them (Fig. 1c, 2a, c, 5a, b, 6c). This conventional feature of a palmette suggests that we are not dealing with a palm canopy, but rather a tetramorous, polypetalous flower that displays three of its four sepals in profile (Fig. 2b, 3d, 4a, 5c, 6b). If this is the case, then we are compelled to identify the 'sacral tree' of Mesopotamia as a stylized lotus shoot rather than a palm tree, for flowers of the Egyptian lotus (*Nymphaea nouchalii* Burm. f.; = *N. caerulea* Savigny *pro syn.*; Verd-court 1989) are large, tetramorous, and solitary (Fig. 3c, d). In contrast, flowers of a date palm are miniscule, hexamerous, and born numerously on a highly ramified, spathate inflorescence (Fig. 3a). Hence it follows that the columnar axis of the sacral tree does not represent the woody trunk of a date palm (Fig. 3a), but rather an upright, naked, succulent lotus stalk (Fig. 2c, d, 3c, d, 4e).

Mesopotamian artisans often placed stalked palmettes in the hands of dignitaries and enthroned kings on temple reliefs (Danthine 1937, Fig. 904–908, 914, 924, 1095; Frankfort 1989, Fig. 231, 358; Mazar 1961, II:143, 270; Roaf



**Fig. 3. a-d.** Plants identified with the Symbolic Tree of Life. **a.** Growth habit of a flowering date palm (*Phoenix dactylifera*). Note the persistent leaf bases on a broad, woody trunk, pinnately compound leaves, dangling spathes and highly ramified flowering stalks. **b.** Flowering and fruiting stalks of a pomegranate (*Punica multiflora*). Note that the flowers and fruits are born on thin, foliaceous, ramified, woody stems. **c.** Growth habit of the 'Egyptian lotus' or 'Lily of the Nile' (*Nymphaea nouchalii*). Note that the plant produces a succession of solitary flowers born on thick, naked, succulent stems. The budding stalks suggest the image of a rising serpent when they emerge from the water. Fruiting stalks recoil in a serpentine manner as they retract their pollinated flowers back into the water. **d.** The 'Egyptian lotus' displays four outer sepals and numerous azure petals when in bloom. Note that the flowers are always born singly at the apex of a thick, succulent shoot.





**Fig. 4. a–f.** The fruit of the immortalizing tree of life. **a.** Stylized lotus fruits are integrated into a lotus bud-and-blossom motif on an offering table that was dedicated to the sun-god Amun at Karnak. Thebes, Egypt. 9<sup>th</sup> c. BCE (British Museum). **b.** A priest carries three lotus fruits while a king (not seen) leads the way with three lotus flowers in hand (Frankfort 1989, Pl. 199). The supple, succulent stems of the fruits suggest the image of a lotus peduncle rather than a pomegranate stem. Khorsabad (Dur Sharrukin), Iraq. 8<sup>th</sup> BCE (Louvre Museum). **c.** Ivory scepters fashioned in the image of the fruiting lotus shoots are frequently uncovered in archeological zones of the Near East. The rod presumably symbolizes fertility and the vital powers of the king. Fosse Temple, Lashich, Israel. 14<sup>th</sup> c. BCE (British Museum). **d.** Numerous ivory pieces that once decorated palace furniture of Assurnasirpal present a running lotus flower-and-fruit motif. Nimrud, Iraq. 8<sup>th</sup> c. BCE (British Museum). **e.** Fertile shoots of the Egyptian lotus exhibit succulent stems, a swollen ovate fruit, and clasping, accrescent sepals. **f.** A glazed wall plaque displays bluish palmettes that alternate with a lotus fruit. Nimrud, Iraq. 8<sup>th</sup> c. BCE (British Museum).

1998:171, 178), in which context historians are inclined to identify them as flowering lotus shoots. We also note that paintings and ivory carvings of palmettes were intentionally rendered in blue by the use of lapis lazuli stone insets or pigments made from crushed azurite

and oxides of copper (Fig. 1c, 2d, 4f; Parrot 1961:266). Since flowers of the Egyptian lotus are blue-pigmented, and those of a date palm cream-colored, we may be sure that the palmettes were intended to represent a stylized lotus flower.





**Fig. 5. a-d. Egyptian influences on Mesopotamian iconography. a.** Mythic motifs on a silver Phoenician bowl integrate Egyptian and Near Eastern motifs. A personified image of an Egyptian sun-god (Horus/Harpo-crates) is seen arising from a lotus flower that sprouts beside a sacral tree. The tree produces stylized lotus buds and flowers on its lateral branches. Cyprus. 7-8<sup>th</sup> c. BCE (British Museum). **b.** A ram-headed sphinx strides across a lotus grove as he approaches a lotiform tree of life. Although this winged caprid resembles the Egyptian sun-god known as Khnum, he symbolizes a Near or Middle Eastern divinity. Note that the chimera

Numerous ivory engravings and figurines of Phoenician origin lend credence to a floral interpretation of the sacral tree's palmettes. An exemplary specimen from Assurnasirpal's palace at Nimrud portrays, for example, a winged sphinx striding across a lotus bud-and-blossom motif as he approaches a tree of life (Fig. 2d). Although this damaged fragment does not provide a clear view of the plant's pillared trunk, we do observe the conventional hooked branches of the sacral tree. We also pay heed to alternating lotus buds and flowers that sprout from the tips of lateral shoots (Fig. 1c, 5a, b; see also Danthine 1937 for hundreds of examples, and Mazar 1961, II:214, 215 for examples from Samaria and Megiddo, Israel). We note that the griffin has placed one forepaw upon a full-blown lotus flower as he extends another protective paw toward a blue-pigmented lotus bud on the sacred tree. Hence the upwardly mounting, stylized buds and blossoms on the tree clearly mirror the image of a lotus bud-and-blossom motif that runs along the lower border of the fragment.

The symbolic equivalency of the palmette and lotus blossom is further implied by placing alternating images of a solitary fruit between each flower (Fig. 4a, d, f; D'Alviella 1956, Fig. 63, 64, Pl. IV). This fruit is consistently rendered with an ovoid pericarp and persistent, clasping sepals. While art historians and botanists are inclined to identify the fruit as a pomegranate, *Punica multiflora* Hort. (Avigad 1990; Halpern 1992; Keel and Uehlinger 1998:360; Moldenke and Moldenke 1952:191–192), there is ample reason to question this determination. For one, pomegranates share no ecological relationship with date palms in the natural world, except for the fact that they are both semi-domesticated species. Secondly, pomegranate plants share few, if any, morphological characteristics with a palm tree (Fig. 3a, b). Finally, we note that fruits

of the sacral tree are often incorporated into stylized configurations of palmettes and lotus motifs in Mesopotamia (Fig. 4d, f) and Egypt (Fig. 4a), suggesting that the fruit may share a symbolic relationship with water lilies. Indeed, an Assyrian dignitary that dangles a cluster of three sacral fruits (Fig. 4b) is preceded on the same relief by a king that holds three lotus flowers in hand (Frankfort 1989, Fig. 199; see also Danthine 1937, Fig. 119, 914). This historical scene confirms that Mesopotamian artisans recognized some sort of biological or symbolic relationship between the stylized fruit and lotus flower in religious rituals.

Indeed, if we consider the peculiar morphology of the distinctive fruit, we recognize that the fruiting body is more readily identified as a lotus berry than a pomegranate, since ovoid *Nymphaea* berries are always born at the apex of thick, flexible, succulent shoots, and retain accrescent sepals that clasp and surpass the pericarp (Fig. 4a–f). These diagnostic characteristics accord in every way with fruiting structures of the sacred tree (Danthine 1937: Fig. 423–432, 440, 448), yet they contrast remarkably with pomegranate fruits, which normally develop as lateral shoots on thin, rigid, highly ramified, foliaceous stems (Fig. 3b). Hence we are bound to interpret the running palmette-and-fruit motif as a permutation on the lotus bud-and-blossom motif.

### PHENOLOGICAL AND MORPHOLOGICAL CHARACTERISTICS OF THE EGYPTIAN LOTUS

The convention of presenting three lotus flowers or fruits in the hands of Mesopotamian gods and dignitaries (Fig. 4b, 5d; Danthine 1937, Fig. 488, 524, 818, 909, 913–915, 919) probably derives from the ancient Egyptian practice of portraying lotus blossoms in triplicate (Emboden

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and sacral tree carry a similar crown that is formed by a sun and moon. A similar crown is observed on the sacral tree's guardian serpents in Fig. 1c. Serpentine lotus stems issue from the feet of two personified aquatic divinities. Ft. Shalmaneser, Iraq. 8<sup>th</sup> c. BCE (Metropolitan Museum New York). c. A lotus-goddess stands upon a lotus flower as she raises a pair of flowers to the sun. A solar disk bearing two Egyptian serpents (uraei) symbolizes power and divinity, as do the lions which this goddess has hoisted into the heavens by the hind legs. The masculine equivalent of this floral goddess is seen in Fig. 1b. Ft. Shalmaneser, Iraq. 8<sup>th</sup> c. BCE (Metropolitan Museum New York). d. An Egyptian-styled lotus-goddess emerges inside a winged disk so as to symbolize the immortal sun and flower (compare Fig. 1e). She raises lotus buds from her feathered orb while a priest upholds three of her budding lotus shoots to the 'Queen of Heaven'. Ft. Shalmaneser, Iraq. 8<sup>th</sup> c. BCE (Metropolitan Museum, New York).

1978, 1989). As noted by Emboden, this custom relates to the natural behavior of lotus flowers, which open and close thrice over the course of three days (Meeuse and Schneider 1979). It is also widely acknowledged that the symbolic relationship between the Egyptian lotus and sun is based on the natural color scheme and radial symmetry of lotus blossoms, for flowers of *Nymphaea nouchalii* display a golden ovarian disk inside a sky-blue corolla (Fig. 1c, 2b, 5c, d, 6b), suggesting the image of a yellow sun in an azure sky. Water lily blossoms also share a close behavioral connection with the sun by the idiosyncratic manner in which they open their petals at dawn and close them before the onset of dusk. Hence Egyptian and Middle Eastern iconographers and mythographers recognized a natural symbolic relationship between their sacred flower and the sun.

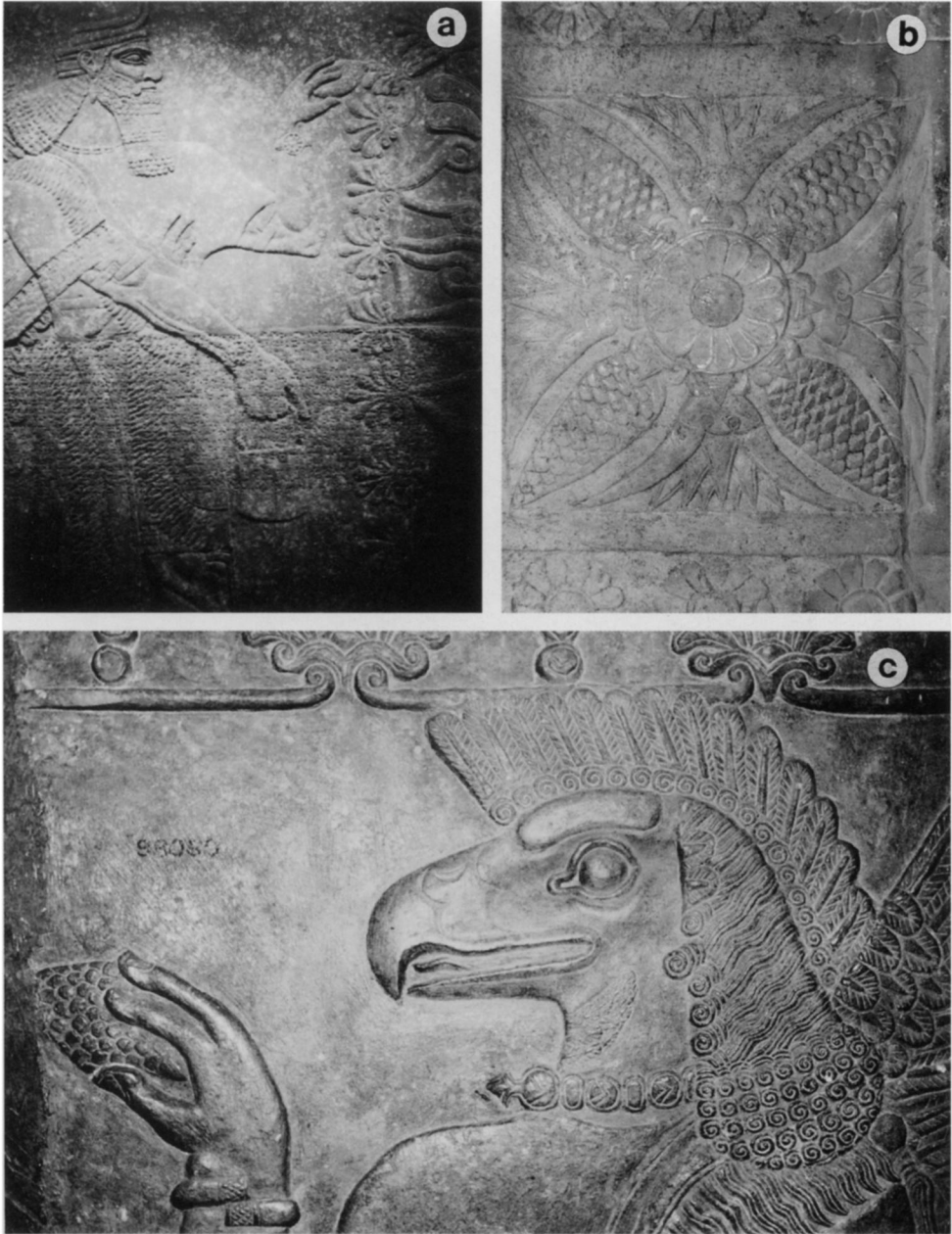
The Egyptian lotus also shares a close symbolic association with various mythical serpents known variously as Edjo, Buto, Apep, or Seth. Images of these symbolic creatures appear frequently among reliefs of lotus groves the conventionally encircle Egyptian temples, or otherwise dangle from blue-winged, solar disks that decorate the hallways and portals of temple interiors (Fig. 6c). These standard iconographic forms are apparently based, once again, on the general morphology and natural behavior of lotus shoots, as the latter structures bear a distinct likeness to a snake when they emerge from the dark recesses of their aquatic habitats. Their tubular stalks suggest the image of a rising serpent's body, while their swelling buds suggest the aspect of a serpent's heads (Fig. 3c). Lotus stalks also exhibit a decidedly snake-like behavior following the third day of anthesis, when their peduncles recoil in a serpentine fashion to draw their pollinated flowers back into the water (Fig. 3c; Meeuse and Schneider 1979). Continually rising from, and retreating into, the waters of the rivers and lakes, lotus shoots were envisaged symbolically as the living embodiment of a recurrent sun and serpent: hence the widespread Egyptian and Middle Eastern iconographic custom of associating coiling snakes with budding and flowering lotus stalks (Fig. 1a, 2a, b, c, 4b, 5b; see also Danthine 1937, Fig. 152, 377, 615; Gillispie and Dewachter 1987, Vol. 4: Pl. 29, 41.2, 67.18; Keel and Uehlinger 1998, Fig. 336). To further develop this symbolic relationship, Egyptians often placed the

emblem of a sun and moon upon the serpent's head to identify the plant and animal with their sun-like flowers (Fig. 1c, 5c). This same stylistic nuance is frequently encountered in Near Eastern iconography (Fig. 1a, c, d, 5a, b).

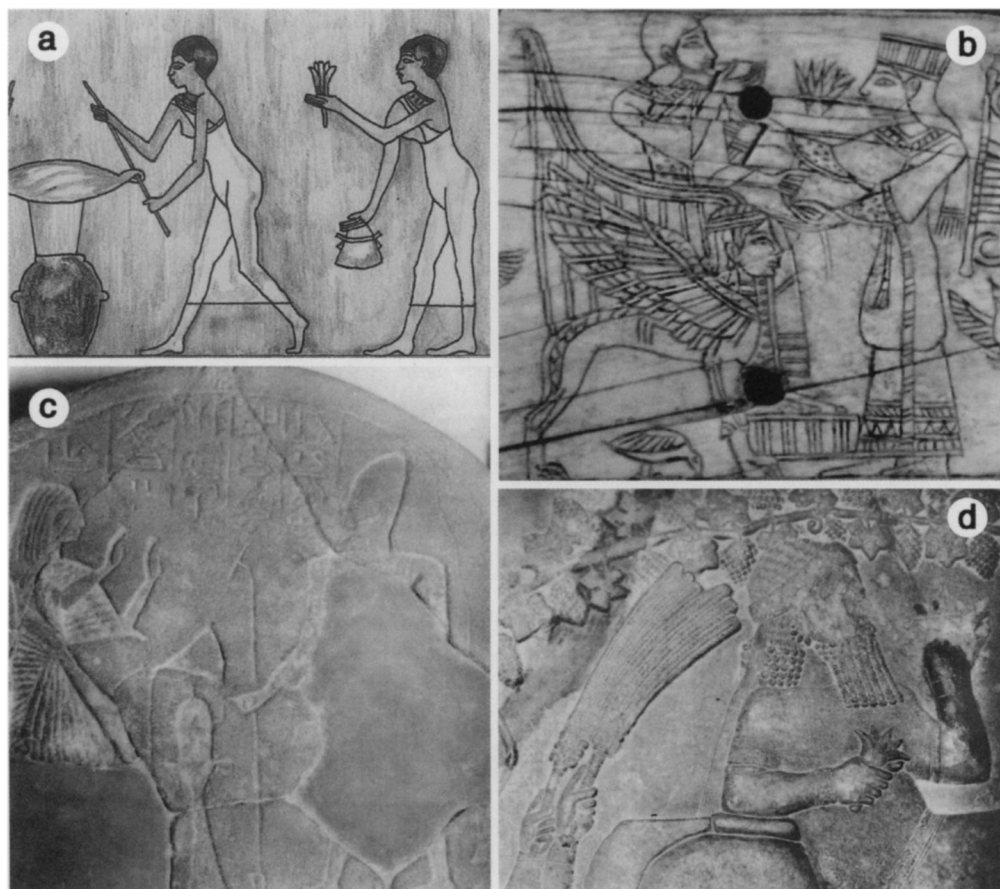
The plant's habit of producing a succession of lotus buds, flowers, and fruits is fittingly exemplified, therefore, by the classic bud-and-blossom motif or flower-and-fruit configuration (Fig. 2b, d, 4a, d, f, 5a, 6c, 7b). In fact, all of these plant parts were employed as a symbol of vitality or eternal life. Images of lotus fruits were often carried by kings and aristocrats in the form of ivory scepters throughout the Middle East (Fig. 4c; Avigad 1990; Halpern 1992), for example, on a specimen of which has been traced directly to Solomon's temple in Jerusalem (Avigad 1990; Halpern 1992). This piece gives us reason to believe that kings of his day may have employed the image of a lotus fruit to signify their close relationship with the tree of life.

### EGYPTIAN INFLUENCES ON THE SACRAL TREE MOTIF

Art historians have long acknowledged that iconographic schools of art in the Near and Middle East were influenced by the Egyptians (Black and Green 1992:84; Cline 1995; Frankfort 1989; Jones 1986:28–29; Shaw 1992:29), and we frequently encounter the intermingling of Egyptian and Middle Eastern deities and motifs on ancient ivory carvings and metalwork that originate from these regions of the world. We observe, for example, a Near Eastern rendering of the tree of life beside an Egyptian-styled lotus blossom on a silver Phoenician bowl (Fig. 5a). These motifs are presented in a mythical context by associating the lotus-born Egyptian sun-god known as Horus or Harpocrates with a pair of Near Eastern deities, the latter of whom pluck lotus buds and blossoms from the corniculate branches of a sacral tree (Fig. 5a). Similar cross-cultural associations of Egyptian and Near Eastern divinities are observed among a large stash of Phoenician ivories that were unearthed from Assurnasirpal's palaces at Nimrud and Nineveh. One specimen portrays a winged caprid with recurved horns striding across a lotus grove towards a lotus-tree of life (Fig. 5b), his general form and natural surroundings suggesting those of the Egyptian capriform sun-god known as Khnum. Statues of Khnum once lined the main entrance to the temple of Karnak on



**Fig. 6. a–d.** The anointing cone and Sacred Lotus. **a.** A winged divinity (*lamassu* or *shedû*) holds a pail and touches his cone to a flower on the lotus-tree of life. **b.** He may be extracting immortalizing waters from the plant for the benefit of the king or anointing the plant to insure its resurrection. Nimrud, Iraq. 883–859 BCE (Boston Museum Fine Arts). **c.** The enigmatic cone of griffins and winged genii are often associated with the sacred lotus. Four alternating images of the flowers and cones face the four cardinal point of space, ostensibly to identify the plant as a universal principle. Nineveh, Iraq. 704–681 BCE (British Museum). **d.** A griffin holds a cone before the world-tree. Note that remnants of a lotus bud-and-blossom motif run along the upper border (see also Fig. 2b). Nineveh, Iraq. 704–681 BCE (British Museum).



**Fig. 7. a–d.** The lotus in libation scenes. **a.** Lotus flowers were extracted en masse by the Egyptians. Note that the flower collectors carry the same buckets that are held by Mesopotamian griffins, priests and winged genii. Beni Hasan, Egypt, 2<sup>nd</sup> millennium BCE (redrawn from Mazar 1961, II:143). **b.** An aristocrat of Canaan is offered a lotus flower and libation cup after returning from a successful military campaign. Note that his seraphic throne is supported by a pair of griffins, whose primary roles are to protect and sanctify the sacred tree of life. Megiddo, Israel. 12<sup>th</sup> c. BCE (courtesy of the Israel Antiquities Authority). **c.** A lotus libation is offered by a Canaanite priestess to “Seth of Sapuna” (= ‘Baal of Sapon’). Note that the god carries an Egyptian ‘waz’ scepter even though he is a Levantine god. Temple of Baal, Ras Shamra, Syria, 13<sup>th</sup> BCE (Louvre Museum). **d.** Assurbanipal is offered a libation in a lotiform cup. He holds a lotus in his hand as he drinks in his garden of delight. Nineveh, Iraq, 6<sup>th</sup> c. BCE (British Museum).

the Nile (Murnane 1996:288, 306), and also appear among the massive lotus columns that occupy the inner confines of this famous sanctuary. Mesopotamian renderings of this god (i.e., at least in form) pressed deep into the heart of Assyria by the turn of the 1<sup>st</sup> millennium BCE (Danthine 1937, Fig. 185, 237, 387, 489, 707), and continued to maintain their close associations with lotus groves. Like other Middle Eastern and Egyptian deities, he bears a sun and moon upon his head (Fig. 5b); and we note that the goat’s headdress mirrors the general aspect

of the sacral tree’s canopy, presumably to draw a symbolic connection between the mythical plant and animal.

A Middle Eastern goddess that is frequently encountered among Assurnasirpal’s ivory collections (Fig. 5c, d) similarly exhibits the distinctive bodily form and hairstyle of various Egyptian lotus-goddesses (i.e., Maat, Isis, Hathor, and Nut). In one specimen (Fig. 5c) she seems to represent the female personification of a lotus plant, as her stout body seems to take the place of a lotus stalk when she stands upon

a lotus podium to raise her blossoms before an Egyptian-styled sun (Fig. 5c). The goddess grasps two lionesses by the hind legs to signify her feminine prowess and suggest her general equivalency to various masculine gods of the Middle East (Fig. 1b). This goddess of vegetation also identifies herself with the sun (Fig. 5d), in which guise she emulates, once again, various masculine sun-gods in Mesopotamia and Persia (Fig. 1e, 2c; Frankfort 1989, Fig. 428; Rauf 1998:163, 219). Yet she maintains her close association with the sacred lotus by presenting a pair of buds from her radiant body. While she brings life to the proverbial scion of the sun (i.e., lotus shoots), a priest pays reverence by offering her a bouquet of three lotus buds (Fig. 5d).

### THE SACRAL TREE IN RELIGIOUS RITUAL

As already mentioned, the tree of life is often protected by various chimeric creatures, including griffins (Fig. 1a, b, d), winged humans (Fig. 1e, 5a, 6a), scorpion-men (Frankfort 1939:201, Fig. 33b, c) or fish-men (Black and Green 1992: 83). These hybrid creatures frequently place a cone-like object upon the sacred tree's palmettes or above a king's head (Fig. 1e, 6a, c; Porter 1993). One current interpretation of this recurrent visual theme identifies the cone as the staminate inflorescence of a palm tree, which some commentators believe was held before the tree and king to simulate the act of fertilization through pollination (Black and Green 1992:46; Porter 1993). This explanation is problematic, however, for several reasons, not least of which is the fact that the cone bears no resemblance whatsoever to a spathe, highly ramified, date palm inflorescence (Fig. 3a). Nor do we ever encounter images of date fruits or palm infructescences in these scenes. That the cone appears at the apex of lateral branches also discounts the notion that the cone represents a plant's flowering stalk (Fig. 1b; Danthine 1937, Fig. 380, 407, 409–412), since flowering shoots of a date palm invariably dangle below the tree's canopy (Fig. 3a; Danthine 1937, Fig. 409–412, 580).

An alternative interpretation of the cone ritual suggests that the king is being atoned or equated with the tree of life (Frankfort 1989:160; Parpola 1995). Whether this is the case or not, we may be sure that the cone relates in some way to the lotus plant, since the structure is frequently associated with lotus stems and flowers on seals

and temple reliefs (Fig. 6b, c; see also Danthine 1937, Fig. 380, 407–412, 490; Frankfort 1989: 197; Jones 1986, Pl. XII.1,4,14; Menant 1887, Pl. VIII.3). One might hypothesize that the cone represents a stylized bud or fruiting shoot of a lotus plant, but neither of these interpretations is entirely satisfying, since imbricate petals of a water lily are never exposed outside of the four tightly clasping sepals, and *Nymphaea* fruits are always ovoid (Fig. 2b, d, 6b, 7b). Whatever the underlying significance of this puzzling structure, the cone is often displayed as a recurring element in a metamorphosing vegetative structure, and probably relates to the concept of eternal recurrence.

The enigmatic cones and buckets that are customarily employed by winged genii in some sort of ritualistic context apparently relate to the giving or taking of life from the sacral tree (Fig. 1d, e, 6a). On the Nile River at Beni Hasan we observe the same distinctive bucket in the hands of Egyptian maidens, who employ the implement to harvest lotus flowers and express their juices into large urns (Fig. 7a; Mazar, 1961 II: 123, III:85, V:85). While archeologists usually suggest that this scene portrays the preparation of perfumes (Lucas 1948:106; Mazar et al. III: 85), there is now reason to believe that the plants were used for different purposes. Recent reports indicate that *Nymphaea* species produce opiate alkaloids (Diaz 1975) and that these psychotropic constituents have been employed by various peoples in ancient Egypt, India and Mexico to induce visions and euphoric states of mind (Emboden 1978, 1979, 1981, 1989; Nunn 1996:157; Spess 2000). Emboden (1978, 1979, 1981) suggests that water lily extracts were employed by Egyptian healers as a shamanistic medium, perhaps in concoctions of poppy and mandrake potions, based on recurrent associations of lotus flowers with drinking vessels in libation scenes. Emboden (1979) references various pharmacological studies that identify the narcotic properties and constituents of water lilies (Delphaut and Balansarad 1941; Descourtiz 1829:266; Pobeguín 1912:49), and confirms these reports by personal experimentations with macerated preparations of Egyptian lotus buds and flowers. He reports that he experienced narcosis, altered visual perceptions, and auditory hallucinations. Diaz (1975) later confirmed that Mexican water lilies produce isoquinoline alkaloids, and hypothesized that these substances are responsible

for the frequent occurrence of water lilies in mythic and ritualistic scenes on Mayan temples (Dobkin de Rios 1974; Diaz 1977; Emboden 1979, 1983; Rands 1953). More recently Spess (2000) has identified the western and eastern lotus (i.e., *Nymphaea* and *Nelumbo*, respectively) as psychotropic plants, suggesting that both plants have played a crucial role in the shamanistic practices of ancient Egypt and Asia.

Evidence for the use of lotus extractions in religious ceremonies extends far beyond the banks of the Nile, as we frequently encounter images of the Egyptian lotus in depictions of libations scenes in Mesopotamia, Israel, Lebanon, and Syria (Mazar 1961, I:121, II:45, 143, 270, III.102, IV:96, 140). A famous relief on the palace walls of Assurbanipal (a 6<sup>th</sup> c. BCE) portrays, for example, an eventual heir to Assurnasipal's kingdom with a lotus blossom in one hand and a damaged drinking vessel in the other (Fig. 7d). The sovereign's consort is positioned at the foot of his couch with a petaloid cup in her hand (Frankfort 1989, Fig. 217), suggesting that she drinks directly from a lotus blossom. This image compares closely with a libation scene portrayed on an ivory plaque from Megiddo, Israel, that dates from the 12<sup>th</sup> century BCE. Here we observe the presentation of a libation cup and lotus blossom to a Canaanite aristocrat (Fig. 7b). The peculiar chair on which this king sits is of notable importance, in that it matches with biblical descriptions of King Solomon's 'mercy seat', the sacred throne upon which the famous anointed kings of Yahweh's people sat when they consorted with the ark of the covenant in the holy of holies (*Exodus* IXX: 19–22; *Samuel* IV.6, VI.2; 1 *Kings* XXVII.25; *Hebrews* IX:5). Indeed, images of the original builder of Solomon's temple in Jerusalem, Hiram of Tyre (1 *Kings* V), occupies the same seraphic throne on his sarcophagus (Mazar 1961, II:143). And drinks from the same libation cup while holding a lotus in hand, while being surrounded by a running lotus bud-and-blossom motif. All of the aforementioned scenes bear close relation to an older relief (13<sup>th</sup> c. BCE) at Ras Shamra, Syria, in which a priestess stands before a lotus and libation vase as she pays reverence to the father of the Ugaritic pantheon, Seth of Sapon (i.e., Baal; Fig. 7c). Although this scene employs Egyptian imagery and is inscribed in hieroglyphs, the god to whom the stele is dedicated is decidedly Levantine.

## THE SACRAL TREE IN MIDDLE EASTERN MYTH

Although many scholars have attempted to interpret the symbolic meaning of the sacral tree in the visual arts, seldom are efforts made to connect these visual motifs with mythical allusions to an immortalizing plant (Roaf 1998:226). Parpola (1993:165) asserts that the sacral tree of Middle Eastern iconographic traditions bears no direct relation to mystical trees in cuneiform texts, but he bases this conjecture on the erroneous assumption that the plant in question is a date palm. But if we consider that the sacral 'tree' is more accurately conceived as a stout aquatic herb with blue blossoms and a golden ovarian disk, we find ample reason to believe that pictorial representations of the world-tree reflect various mythical themes of the Middle East. Sumerian texts from the mouth of the Tigris River describe, for example, a primordial tree of creation that arose from the generative waters of Ur (i.e., near Eridu, Uruk and Eden) with "leaves" the color of lapis lazuli (Jacobsen 1970:1; James 1966:13; Langdon 1928). This plant is called the *giz-kin* in Sumerian tablets or the *kiskannu* in Akkadian texts (Langdon 1928). We presently know of no aquatic plants that produce blue foliage, nor do these characteristics apply to riparian palms or pines (James 1966: 13). Yet the blue leaves of this primeval plant may conceivably pertain to the Egyptian lotus, if we interpret the leaves of the *kiskannu* as the blue, foliose petals of a water lily.

The *giz-kin* or *kisannu* plant is closely associated with a riverine deity known as Enki, a Mesopotamian god of wisdom who once plied the banks of the Tigris River on a 'boat of lapis lazuli'. This god of sweet waters also shares close mythical associations with a popular sun-god (Marduk or Shamash), the latter of whom is occasionally identified as the offspring of the river god. Hence the close relation of these three mythical players—water god, sun god and primordial plant—seems to bear a direct relation to the iconographic confluence of these same symbolic images (Fig. 1a, c, d, 2c, 5a, b, c). The Babylonians referred to Enki by the name of Ea, and symbolized this god of waters with the image of a pillared ram's head (Black and Green 1992, p. 16). This motif relates, no doubt, to the god's mythic identification with an aquatic dragon and ibex in the 'watery deep' (*abzu*) of Eridu



(Kramer and Maier 1989:39, 43), and likely bears some relation to the aforementioned image of an aquatic ram that approaches a pillared lotus-tree with serpentine stems (Fig. 5b; see also Frankfort 1989, Fig. 152, 225, 287, 296, 379, 393; Keel and Uehlinger 1998, Fig. 52, 53, 219, 223).

According to another ancient Sumerian myth, the primordial tree of creation, or *huluppu* plant, was first plucked from the waters of the Euphrates River by a close female associate of Enki, namely Inana, Sumeria's most famous goddess of vegetation (Wolkstein and Kramer 1983:4–9). This goddess cultivated her riverine plant in a holy garden so that it might eventually provide her with a throne and a bed. Unfortunately for the Inana, her precious plant was soon inhabited by a serpent in its roots and an *anzu*-bird in its boughs (much as other immortalizing trees of the ancient Orient). Since these symbolic creatures of the Earth and Sky (respectively) proved unwilling to share the use of their home with the gods, Inana was forced to enlist the help of her famous mythic brother, Gilgamesh, to dispossess the serpent and bird of their home. Having accomplished this feat, Inana fashioned a diadem for her brother and a bed for herself out of the roots and trunk of the wondrous plant.

The Sumerians normally recognized Inana as a goddess of the skies and a sister of the sun-god, Utu. Yet she frequently pays a visit to the underworld of her sister, Ereshkigal, in the aquatic domains of Uruk and Eridu (i.e., near Ur and Eden of Sumerian myths; Wolkstein and Kramer 1983:51–91). In this respect her physical attributes and mythic activities seem to mirror the morphic and behavioral characteristics of her cherished plant; for Inana is intimately associated with aquatic environments, a primeval tree of creation, the cyclic occurrence of vegetative life, and ornaments of gold and lapis lazuli (i.e., the natural colors of the Egyptian lotus). She displays her adornments in the heavens and discards them from her body when she descends into the bowels of the Earth (presumably on an annual basis), much as a lotus blossom. Inana was occasionally identified as none other than Ishtar of Babylon and Assyria or as Ashtarte, Ashtoreth, Asherah or Anat of Canaan and Egypt, all of whom share close iconographic relations with the sacred lotus (Fig. 4 c, d; Budge 1969:278–280; Frankfort 1939:207, 278; Keel

and Uehlinger 1998:54, 65, 66, 86, 87, 360; Patai 1990:58–60, Fig. 12–16, 18).

The *huluppu* plant of Inana is possibly the same immortalizing plant that eluded her famous heroic brother, Gilgamesh, whom in the mythical guise of a mortal man sought a sweet-smelling, aquatic flowering plant (Pritchard 1969:73). Various versions of the Gilgamesh story are recorded on tablets of the Akkadians, Sumerians, Hittites, Hurrians, and Assyrians, and all recount the manner in which a crafty serpent succeeds in reclaiming the plant of the gods from this heroic figure before he is able to consume his prized possession (Pritchard 1969:96). As the serpent repossesses his rightful property, he slips out of his worn-out skin to reveal his immortal character to Gilgamesh, thereby signaling that humankind will be denied the gift of eternal life. It is widely acknowledged that this tale shares a common origin with the biblical account of Eden's proverbial tree of life, since both tales incorporate the mythical themes of a sacred tree, devious serpent, human aspirations to live in paradise, and the origin or perpetuation of human mortality. And it is similarly hypothesized that these tales share close relations with the 'Myth of Etana', in which tale a heroic shepherd known as Etana is granted access to a 'tree of rebirth' (the *sammu* plant) by following the helpful advice of a sun-god (Shamash). In this case, the shepherd is able to elude a diabolical serpent at the root of the sacred tree by mounting the back of a divine eagle to reach the upper boughs of the plant (Black and Green 1992:78; Pritchard 1969:114–119). These and yet other related mythical tales probably relate to the iconographic practice of placing a winged solar orb, eagle, or leogryph above or beside the tree of life (Fig. 1a, c, d, e, 2c), and the custom of placing sacred serpents around the tree's solar orb (Fig. 1c, 5c) and pillared trunk (Danthine 1937, Fig. 152; Frankfort 1939:120–122).

### THE RETURN OF THE TREE OF LIFE

Various mythic traditions of Europe and Asia maintain that the tree of life will reappear on Earth at some time in the distant future and bestow eternal life upon living creation. Zoroastrians believe that the 'tree of all seeds' (*homa*) will spring from the waters of Lake Hamun of Iran during the Earth's final days of reckoning (*Bundahishn* xxvii.4, xxx.24–25; see West 1880, SBE 5:126; Boyce 1991:125), while Muslims

await a similar plant in paradise on the last day of judgement, when it will take its predestined place at the right hand of Allah in the seventh level of heaven (*Koran* liii, lvi). Rabbinical literature acknowledges that the tree of immortal life resides permanently in Yahweh's garden of paradise (*Jalkut Shimeon*, *Genesis* xx; James 1966:778), whereas Christians anticipate the reappearance of the same plant in Jerusalem upon the return of Jesus Christ (*Revelations* ii, xxii). While these and related beliefs have long been dismissed as superstitious speculations by biologists, there appears to be an underlying historical significance to these mythic and prophetic scenarios. An objective consideration of the archaeological record suggests that the plant in question is the Egyptian lotus, and that humankind has never lost contact with the famous 'plant of the gods'. What has apparently been lost over the ages is our understanding of the mythic significance of the plant, and the ritualistic role it once played in the religious traditions of our distant forebears.

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